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EXAMINER	
YACOB, SISAY	

ART UNIT	PAPER NUMBER
2612	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/613,549	HALL ET AL.	
	Examiner	Art Unit	
	Sisay Yacob	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1 The application of Hall et al., "Link module for a downhole drilling network " filed on October 17, 2003 been examined.

Claims 1- 20 are pending

Rejections - 35 USC § 103

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3 The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4 Claims 1-4, 6, 7, 14-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US publication of Hughes (20030213598) in view of US patent of Pacault et al., (6,950,034).

5 As to claim 1, Hughes discloses a downhole assembly comprising a cylindrical housing characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough (Page 3, Par. 0032; Page 5, Claim 1, lines 1-5; Item 200 of figure 2), the cylindrical housing further formed to define at least one recess in the cylindrical wall (Page 5, Claim 1, lines 6-8; Items 244 and 264 of figure 2), however, Hughes does not expressly disclose the downhole assembly being a repeater assembly, a repeater circuit located within the at least one recess, the cylindrical housing further comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess, the annular transmission element operably connected to the repeater. In the field of downhole communication systems, Pacault et al., discloses a downhole assembly comprising, a repeater assembly, a cylindrical housing (Items 22 and 32 of figures 2 and 3) comprising an annular recess formed into at least one of the proximal end and the distal end (Item 25 of figures 2 and 3), and an annular transmission element (Item 26 of figures 2 and 3) located in the annular recess (Col. 4, lines 50-67; Col. 5, lines 1-40; See figures 2-4).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the downhole assembly of Hughes, by incorporating a downhole

assembly comprising, a repeater assembly, a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end located in the annular recess, as disclosed by Pacault et al., in order to have a downhole assembly comprising, a repeater assembly, a cylindrical housing, characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough, the cylindrical housing further formed to define at least one recess in the cylindrical wall, the cylindrical housing further comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess, the annular transmission element operably connected to the repeater, because Hughes discloses a downhole assembly comprising a cylindrical housing characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough, the cylindrical housing further formed to define at least one recess in the cylindrical wall and Pacault et al., discloses a downhole repeater assembly comprising, a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess, however, the combination of Hughes and Pacault et al., does not expressly disclose the repeater circuit located within the at least one recess.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes and Pacault et al., by incorporating a repeater circuit located within the at least one recess, because Pacault et al., disclosed an annular recess formed into at least one of the proximal end and the distal end, and

an annular transmission element located in the annular recess and one skilled in the art realizes the transmission elements located in the annular recess may be modified to include a repeater circuit or any other circuitry.

6 As to claim 2, the downhole repeater assembly of claim 1, further, Hughes discloses a first channel, formed within the cylindrical housing, extending from the at least one recess to at least one of the proximal and distal end (Page 5, Claim 1, lines 6-8; Item 244 of figure 2).

7 As to claim 3, the downhole repeater assembly of claim 1, further, Hughes discloses wherein the annular transmission element inductively converts electrical energy to magnetic energy (Page 2, Par. 0010, lines 20-24; Items 224 and 264 of figure 2).

8 As to claim 4, the downhole repeater assembly of claim 1, further, Hughes discloses wherein the annular transmission element comprises an electrical contact to transmit electrical energy directly to another contact (Page 2, Par. 0010, lines 20-24; Items 224 and 264 of figure 2).

9 As to claim 6, the downhole repeater assembly of claim 1, further, Hughes discloses wherein the cylindrical housing is inserted into the bore of a host downhole tool (Page 3, Par. 0032, lines 1-3; Item 200 of figures 2, 3 and 10 and 12) and the host

downhole tool further comprises a pin end and a box end (Items 120 and 300 of figure 5), the pin end having an external threaded portion and the box end having an internal threaded portion (Items 122 and 304 of figure 3, 5, 8, 9A-B, 10, 12 and 13).

10 As to claim 7, the downhole repeater assembly of claim 6, further, Hughes discloses wherein the box end lacks an integrated secondary shoulder (Items 120 and 160 of figures 1 and 3).

11 As to claim 14, Hughes discloses a downhole module comprising a cylindrical housing, characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough (Page 3, Par. 0032; Page 5, Claim 1, lines 1-5; Item 200 of figure 2), the cylindrical housing further formed to define at least one recess in the cylindrical wall (Page 5, Claim 1, lines 6-8; Items 244 and 264 of figure 2), however, Hughes does not expressly disclose the downhole assembly being a repeater assembly, a repeater circuit located within the at least one recess, and a data acquisition circuit located within the at least one recess, connected to the repeater circuit, to acquire data from at least one sensor. Pacault et al., discloses a downhole assembly comprising, a repeater circuit located within the downhole assembly (Items 22 and 32 of figures 2 and 3), and a data acquisition circuit located within the downhole assembly (See figure 5), connected to the repeater circuit, to acquire data from at least one sensor (Col. 1, lines 12-26; Col. 7, lines 56-67; Col. 7, lines 1-7).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the downhole assembly of Hughes, by incorporating a downhole assembly comprising, a repeater circuit located within the downhole assembly, and a data acquisition circuit located within the downhole assembly, connected to the repeater circuit, to acquire data from at least one sensor, as disclosed by Pacault et al., in order to have a downhole module comprising a cylindrical housing, characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough, the cylindrical housing further formed to define at least one recess in the cylindrical wall, a repeater circuit located within the at least one recess, and a data acquisition circuit located within the at least one recess, connected to the repeater circuit, to acquire data from at least one sensor, a repeater circuit located within the downhole assembly, and a data acquisition circuit located within the downhole assembly, connected to the repeater circuit, to acquire data from at least one sensor, because Hughes discloses a downhole assembly comprising a cylindrical housing characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough, the cylindrical housing further formed to define at least one recess in the cylindrical wall and Pacault et al., discloses a downhole repeater assembly comprising, a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess, however, the combination of Hughes and Pacault et al., does not

expressly disclose a data acquisition circuit located within the downhole assembly being located in a recess.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes and Pacault et al., by incorporating a repeater circuit located within the at least one recess, because Pacault et al., disclosed an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess and one skilled in the art realizes the transmission elements located in the annular recess may be modified to include a data acquisition circuit or any other circuitry.

12 As to claim 15, the downhole module of claim 14, further, Pacault et al., discloses an uphole data link extending from the repeater circuit to the proximal end, and a downhole data link extending from the repeater circuit to the distal end (Col. 3, lines 1-15).

13 As to claim 16, the downhole module of claim 14, further, Hughes discloses wherein the cylindrical housing is characterized by at least one annular recess formed into at least one of the proximal end and the distal end (Page 5, Claim 1, lines 6-8; Item 244 of figure 2).

14 As to claim 17, the downhole module of claim 16, Pacault et al., discloses wherein the cylindrical housing further comprises an annular transmission element

located in the annular recess (Col. 4, lines 50-67; Col. 5, lines 1-40; Item 26 of figures 2 and 3; See figures 4).

15 As to claim 20, Hughes discloses a downhole repeater assembly comprising a cylindrical housing, characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough (Page 3, Par. 0032; Page 5, Claim 1, lines 1-5; Item 200 of figure 2), the cylindrical housing having at least one recess formed into the outer rounded surface of the cylindrical wall (Page 5, Claim 1, lines 6-8; Items 244 and 264 of figure 2) and a signal repeater located within the at least one recess however, Hughes does not expressly disclose the downhole assembly being a repeater assembly, a repeater circuit located within the at least one recess. Pacault et al., discloses a downhole assembly comprising, a repeater assembly, a cylindrical housing (Items 22 and 32 of figures 2 and 3) comprising an annular recess formed into at least one of the proximal end and the distal end (Item 25 of figures 2 and 3), and an annular transmission element (Item 26 of figures 2 and 3) located in the annular recess (Col. 4, lines 50-67; Col. 5, lines 1-40; See figures 2-4).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the downhole assembly of Hughes, by incorporating a downhole assembly comprising, a repeater assembly, a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end located in the annular recess, as disclosed by Pacault et al., in order to have a downhole repeater

assembly comprising a cylindrical housing, characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough, the cylindrical housing having at least one recess formed into the outer rounded surface of the cylindrical wall, because Hughes discloses a downhole assembly comprising a cylindrical housing characterized by a proximal end and a distal end, having a substantially cylindrical wall, the cylindrical wall defining a central bore passing therethrough, the cylindrical housing further formed to define at least one recess in the cylindrical wall and Pacault et al., discloses a downhole repeater assembly comprising, a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess, however, the combination of Hughes and Pacault et al., does not expressly disclose the repeater circuit being located within the at least one recess.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes and Pacault et al., by incorporating a repeater circuit located within the at least one recess, because Pacault et al., disclosed an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess and one skilled in the art realizes the transmission elements located in the annular recess may be modified to include a repeater circuit or any other circuitry.

16 Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes n view of Pacault et al., and further in view of US patent of Ringgenberg et al., (6,177,882).

17 As to claim 5, the downhole repeater assembly of claim 1, however, the combination of Hughes and Pacault et al., does not expressly disclose at least one battery located in the at least one recess. In the same field of endeavor, Ringgenberg et al., discloses at least one battery located in the at least one recess of a downhole repeater assembly (Col. 14, lines 17-25; Items 196, 200 and 202 of figures 8 and 10).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes and Pacault et al., by incorporating a battery located in the at least one recess, in order to have a downhole repeater assembly comprising at least one battery located in the at least one recess, because Hughes and Pacault et al., disclose a downhole repeater assembly comprising, a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess and Ringgenberg et al., discloses a downhole repeater assembly comprising a battery and electronic components that are located in at least one recess.

18 As to claim 18, the downhole module of claim 14, however, the combination of Hughes and Pacault et al., does not expressly disclose at least one battery located in the at least one recess. Ringgenberg et al., discloses at least one battery located in the

at least one recess of a downhole repeater assembly (Col. 14, lines 17-25; Items 196, 200 and 202 of figures 8 and 10).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes and Pacault et al., by incorporating a battery located in the at least one recess, in order to have a downhole module comprising at least one battery located in the at least one recess, because Hughes and Pacault et al., disclose a downhole module comprising a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess and Ringgenberg et al., discloses a downhole module comprising a battery and electronic components that are located in at least one recess.

19 Claims 8, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes n view of Pacault et al., and further in view of US publication of Allamon et al., (20020061224).

20 As to claim 8, the downhole repeater assembly of claim 7, however, the combination of Hughes and Pacault et al., does not expressly disclose a secondary shoulder insert inserted into the box end, independent from the box end, capable of absorbing stresses normally incident on an integrated secondary shoulder. In the field apparatus for holding pipe or other tubular members in a vertical position, and increases the strength of drill pipe slip assemblies, Allamon et al., discloses a secondary shoulder

insert inserted into the drill string, independent from the upper and lower components that is capable of absorbing stresses (Page 1, Par. 0010, lines 1-7; Page 3, Par. 00370, lines 1-14; Item 14 of figures 2 and 6A-B).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes and Pacault et al., by incorporating a secondary shoulder insert inserted into the drill string, as disclosed by Allamon et al., in order to have a downhole repeater assembly comprising a secondary shoulder insert inserted into the box end, independent from the box end, capable of absorbing stresses normally incident on an integrated secondary shoulder, because Hughes and Pacault et al., disclose a downhole repeater assembly comprising, a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess and Allamon et al., discloses a downhole assembly comprising a secondary shoulder insert inserted into the drill string, independent from the upper and lower components that is capable of absorbing stresses.

21 As to claim 9, the downhole repeater assembly of claim 8, further, Hughes discloses wherein stresses normally incident on a secondary shoulder are not imposed on the cylindrical housing (Page 4, Par. 0035, lines 20-37).

22 As to claim 10, the downhole repeater assembly of claim 8, further, Hughes discloses wherein surface characteristics of the secondary shoulder insert engage

corresponding surface characteristics of the inside diameter of the host tool to transfer a load, incident on the secondary shoulder insert, to the host tool (Page 4, Par. 0035, lines 20-37).

23 Claims 11, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes n view of Pacault et al., and further in view of US patent of Montgomery et al., (5,166,908).

24 As to claim 11, the downhole repeater assembly of claim 1, however, the combination of Hughes and Pacault et al., does not expressly disclose wherein the repeater circuit further comprises a data acquisition circuit to acquire data from at least one sensor. In the data transmission and method field of endeavor, Montgomery et al., discloses a downhole repeater module comprising repeater circuit further comprises a data acquisition circuit to acquire data from at least one sensor (Col. 7, lines 22-41).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes and Pacault et al., by incorporating a downhole repeater module comprising data acquisition circuit to acquire data from at least one sensor, as disclosed by Montgomery et al., in order to have a downhole module comprising a data acquisition circuit to acquire data from at least one sensor, because Hughes and Pacault et al., disclose a downhole module comprising a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the

annular recess and Montgomery et al., discloses a downhole module comprising a data acquisition circuit to acquire data from at least one sensor.

25 As to claim 12, the downhole repeater assembly of claim 11, further, Montgomery et al., wherein the at least one sensor is selected from the group consist of a pressure transducer, an inclinometer, a thermocoupler, an accelerometer, an imaging device, and a seismic device (Col. 7, lines 15-41).

26 As to claim 19, the downhole module of claim 14, however, the combination of Hughes and Pacault et al., does not expressly disclose wherein the at least one sensor is selected from the group consisting of a pressure transducer, an inclinometer, a thermocoupler, an accelerometer, an imaging device, and a seismic device. In the data transmission and method field of endeavor, Montgomery et al., discloses a downhole repeater module comprising at least one sensor that is selected from the group consisting of a pressure transducer and an accelerometer, and a seismic device a sensor (Col. 7, lines 15-41).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes and Pacault et al., by incorporating a downhole repeater module comprising at least one sensor, as disclosed by Montgomery et al., in order to have a downhole module comprising at least one sensor is selected from the group consisting of a pressure transducer, an inclinometer, a thermocoupler, an accelerometer, an imaging device, and a seismic device, because Hughes and

Pacault et al., disclose a downhole module comprising a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess and Montgomery et al., discloses a downhole repeater module comprising at least one sensor that is selected from the group consisting of a pressure transducer and an accelerometer, and a seismic device a sensor.

27 Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes n view of Pacault et al., and further in view of Montgomery et al., and further in view of US publication of Koro (20030102980).

28 As to claim 13, the downhole repeater assembly of claim 1, however, the combination of Hughes, Pacault et al., and Montgomery et al., does not expressly disclose wherein the repeater circuit further includes components selected from the group consisting of signal filtering circuitry, signal error checking circuitry, device control circuitry, a modem, a digital signal processor, and a microcontroller. In a system, method, and a signal repeater device for transmitting signals along a drill pipe field of endeavor, Koro discloses a repeater circuit further includes components selected from the group consisting of signal filtering circuitry, signal error checking circuitry, device control circuitry, a modem, a digital signal processor, and a microcontroller (Pages 6-7, Par. 0076; See figure 1).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Hughes, Pacault et al., and Montgomery et al., by incorporating a downhole module a repeater circuit further includes components selected from the group consisting of signal filtering circuitry, signal error checking circuitry, device control circuitry, a modem, a digital signal processor, and a microcontroller, as disclosed by Koro, in order to have a downhole module comprising wherein the repeater circuit further includes components selected from the group consisting of signal filtering circuitry, signal error checking circuitry, device control circuitry, a modem, a digital signal processor, and a microcontroller, because Hughes, Pacault et al., and Montgomery et al., disclose a downhole module comprising a cylindrical housing comprising an annular recess formed into at least one of the proximal end and the distal end, and an annular transmission element located in the annular recess and a data acquisition circuit to acquire data from at least one sensor and Koro discloses a downhole module comprising wherein the repeater circuit further includes components selected from the group consisting of signal filtering circuitry, signal error checking circuitry, device control circuitry, a modem, a digital signal processor, and a microcontroller.

Conclusion

29 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following cited arts are further to show the sate of art related to link module for a downhole-drilling network.

30 In the US patent of (6,666,274) Hughes discloses method and apparatus for tubing containing electrical wiring insert.

31 In the US patent of (6,752,207) Danos et al., discloses method and apparatus for a tubular housing having an eccentric longitudinal bore therethrough.

32 In the US patent of (6,866,306) Boyle et al., discloses method and apparatus for inductive coupler element electrically coupled in a downhole tool.

33 In the US publication of (20040217880) Clark et al., discloses method and apparatus for a drill string telemetry link comprising a plurality of wired drill pipes each having a telemetry section.

34 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sisay Yacob whose telephone number is (571) 272-8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sisay Yacob

04/06/2006

S.Y.

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